

# Department of Aeronautics and Astronautics Naval Postgraduate School

## Faculty Vita

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### Marcello Romano

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### **Education:**

Ph.D. in Aerospace Engineering, Polytechnic of Milan, Italy, 2001

Laurea Diploma in Aerospace Engineering, Polytechnic of Milan, Italy, 1997

### **Related Experiences:**

Tutor payload specialist of the experiment “Popeye”, 4<sup>th</sup> ESA Student Parabolic Flight Campaign, Bordeaux, France, July 2001

Design co-investigator of the “Multiobjective Onboard Experiment for Advanced Researches on Robotics, Control Systems and Materials Behavior”, proposed to fly on the International Space Station and sponsored by the Italian Space Agency (ASI), Winter/Spring 2001

Co-tutor of four Laurea Dipoloma theses in aerospace engineering at Polytechnic of Milan, 1999-2001

Visiting Research Associate, Naval Postgraduate School, Winter/Spring 2000

Lecturer on Aerospace Control Systems, Polytechnic of Milan, Spring 1999

Lecturer on Aeronautical Construction I, Polytechnic of Milan, Fall 1999

### **Honors and Awards:**

US National Research Council Post-Doctoral Fellowship, 2001

Summer studentship, European Centre for Particle Physics (CERN), Geneva, Switzerland, Summer 1997

Studentship, European Space Agency-European Astronaut Centre (ESA-EAC), Cologne, Germany, Spring/Fall 1996

### **Scientific and Professional Society Membership:**

American Institute of Aeronautics and Astronautics

Italian Association of Research Doctors

### **Principal Publications (Last 5 Years):**

F. Bernelli-Zazzera, M. Romano, B. Agrawal, *Tracking Control of Flexible Space Manipulators: Simulations and Experiments*, 51<sup>th</sup> IAF International Astronautical Congress, Rio de Janeiro, Brasil, October 2000.

- M.Romano, *Experiments on near-minimum-time control of a flexible space robot using command shaping techniques and joint friction compensation*, Research Report SRDC-001, Spacecraft Research and Design Center, Naval Postgraduate School, Monterey, California, July 2000.
- F.Bernelli-Zazzera, A.Ercoli-Finzi, M.Romano, M.Tomasi, *Shape and vibration control of a multibody flexible structure using recurrent neural networks*, Journal of the Chinese Society of Mechanical Engineers, Vol.21, No.1, pp.67-76 (2000).
- M.Vasile, M.Romano, F.Trainiti, *An Optical Based Strategy for Deep Space Autonomous Navigation*, 4<sup>th</sup> ESA International Conference on Spacecraft Guidance, Navigation and Control Systems, ESTEC, Noordwijk, Netherlands, October 1999.
- F. Bernelli-Zazzera, M. Romano, *Optimum Path Planning for Flexible Space Manipulators*, 50<sup>th</sup> IAF International Astronautical Congress, Amsterdam, Netherlands, October 1999.
- F. Bernelli-Zazzera, M. Romano, *Time-Optimal Motion for Robotic Manipulators with Obstacles Avoidance*, Proceedings of 4<sup>th</sup> International Conference on Dynamics and Control of Structure in Space, Cranfield University, Cranfield, UK, May 1999
- F. Bernelli-Zazzera, A. Ercoli-Finzi, M. Romano, M.Vasile, *Preliminary Design of the Microsatellite PalaMede*, IAF Conference Novel Concepts for Smaller, Faster and Better Space Missions, Redondo, USA, April 1999.